

Water Conservation Task Force Recommendations

May 3, 2007



Task Force Goals

- Find means to reduce the growth in peak day demand by 1% per year for 10 years beginning in 2007
 - ~25 MGD
 - Approximately triple the current savings rate
- Produce a policy document for Council consideration and formal adoption
- Policy document will serve as a guideline for drafting necessary amendments to the city code and technical manuals



Plumbing Fixture Retrofit

- Plumbing fixtures in MF and ICI properties must comply with current plumbing code standards by December 31, 2011; or upon sale of property, whichever is earlier
- Plumbing fixtures in single family properties must comply with current plumbing code standards by December 31, 2009
 - City would enforce compliance on notification of property transfer



Require Submeters for Water Billing

- All new apartment, mixed use and multiple use properties must bill tenants for individual water use
 - Privately-owned meters or individual City meters



Plumbing Code Changes

- Prohibit liquid ring surgical/dental vacuum pumps
- Require conductivity controllers for steam boilers
- Set maximum flush volume of 0.5 gpf for urinals
- Limit commercial dishwashers to 0.9 gal/rack or 180 gal/hr
- Prohibit garbage grinders in restaurants and cafeterias



Cooling Tower Efficiency Requirements

- Cooling towers permitted after effective date must have:
 - a) makeup and blowdown meters,
 - b) conductivity controllers,
 - c) overflow alarms,
 - d) drift eliminators, and
 - e) a minimum of 5 cycles of concentration.
- Existing cooling towers must install above by 12/31/2010
- Continue rebates to encourage irrigation reuse
- Require reuse of A/C condensate in new large commercial properties



Car Wash Efficiency Standards

- Limit conveyor washes to 40 gallons/car or less
- Limit in-bay washes to 55 gallons/car or less
- Limit large vehicle (bus or large truck) washes to 75 gallons/vehicle or less
- Limit hand wand nozzles to 3 gpm or less



Commercial Clothes Washer Standards

- Set max. water factor of 8.0 for new clothes washers
 - Does not include single-load soft mount machines (residential)
- Existing coin-op equipment must comply by December 31, 2010



Expand Water Use Management Ordinance

Permanent Water Use Restrictions (§ 6-4-63)

- Give commercial and multifamily properties 2 watering days a week
- Prohibit automatic irrigation between 10am and 7pm
- Require rain shut-offs on all existing systems

Water Conservation Stage One Regulations (§ 6-4-64)

- Give residential properties with automatic irrigation 2 watering days a week
- Prohibit outdoor watering between 10am and 7pm
 - Except with a hand-held hose or hand-held bucket



New Landscape and Irrigation Standards

Residential:

- New irrigation systems must meet design requirements, and will be subject to final City inspection
- Installers must develop an as-built design plan and water budget prior to final inspection
- Soil depth for new homes
 - Require minimum 6" soil depth for new homes with shallow soil profiles. A site with 6" of existing soil does not need to add soil.
- Require new turf installations to meet dormancy requirements



New Landscape and Irrigation Standards, cont.

Commercial and Multifamily:

- New irrigation systems must meet design requirements, and will be subject to final City inspection
- Installers must develop an as-built design plan and water budget prior to final inspection
- Minimum depth of 6" of soil meeting City specifications
- Turfgrasses in landscape meet dormancy requirements



WaterWise Landscape Option

- Require homebuilders to offer a WaterWise landscape option in any series of landscape options offered to prospective home buyers
 - Only plants from CoA preferred list or with similar drought-tolerant characteristics
 - Turfgrass covers no more than 50% of landscape area
 - Turfgrass meets dormancy requirements



Irrigation System Analyses

- Commercial, multi-family and municipal properties with automatic irrigation systems over 1 acre or with high water use must submit an irrigation analysis to Austin Water Utility once every three years according to a staggered schedule
- High-volume residential customers:
 - Require irrigation analysis once every three years
 - Applies to residential properties that:
 - Exceed 35,000 per month at least once in each of two consecutive calendar years
 - Are under same ownership for that period



Leak Detection Contract

- Continue annual funding for Leak Detection Contract
 - Approved by Council on October 19, 2006
 - Examines 600 linear miles of pipe
 - Initially focuses on cast iron pipe to find leaks not yet surfaced
- Support Utility's ongoing efforts to repair leaks in a shorter time frame



CIP funding for reclaimed water projects

- Approve funding as part of Utility's Capital Improvement Plan for reclaimed water projects to be started in 2007 and completed by 2011
 - UT Transmission Main (4.0 MGD)
 - ABIA Transmission Main (0.6 MGD)
 - Smith Road Extension (0.5 MGD)
 - Main to the Roy G. Guerrero Colorado River Park (1.0 MGD)
 - 24" Rehabilitation (necessary for Guerrero Park/Smith Road)
 - 12" Rehabilitation (0.1 MGD)
 - 18" Rehabilitation (necessary for Smith Road extension)
- Require customers with access to reclaimed water to use it for irrigation, cooling and other non-potable uses
 - Exceptions for health, safety, and availability



Adjust Utility Water Rates

- Establish a fifth tier for residential customers using more than 25,000 gallons
- Conduct cost of service study to evaluate strategies that will reduce demand by 5 MGD
 - Set rate for fifth tier for residential customers
 - Establish irrigation rates
 - Water budgeting rate for non-residential customers
 - Conservation rate structures for wholesale customers
- Implement strategies feasible under the current billing system as soon as possible
- Implement strategies that are not feasible under the current system after the new billing system is adopted



Modify Utility Bills

- Add graphs of historical and current water use to customer bills
- Require new billing system to:
 - Have water budget capabilities
 - Be able to include additional conservation information
 - Have ability to notify customers when consumption increases dramatically



Wholesale Customers

- Follow-up on contracts that require water conservation measures to be implemented
- Request customers whose contracts don't require conservation to implement conservation measures
- Require any new, amended, or renewed contracts to contain conservation measures comparable to what the City has in place



Increase Water Efficiency in City Facilities

- Require water conservation elements as part of LEED certification for new City facilities
- Require all athletic fields to pay for water above a pre-determined water budget
- Follow through with water efficiency recommendations from the current performance contract, including:
 - Improving cooling tower operations
 - Completing the retrofit of plumbing fixtures
 - Installing weather-based controllers under Parks Department management on 30 athletic fields



Reduce Excessive Water Use Due to High Pressure

- Change plumbing code to require pressure reduction valves (PRVs) on new residential properties with pressure above 65 psi
- Offer \$100 rebate for installing PRVs on existing residential properties with pressure over 60 psi



Alternate Water Sources

- Water Conservation and Watershed Protection staff will meet to explore opportunities for stormwater reuse and other alternative water sources
- Water Conservation and Watershed Protection staff will draft plumbing code language to address non-potable water usage



Comprehensive Public Education Program

- Build Water Conservation "brand"
 - Gradual shift to uniform look and tone for all materials
- Implement extensive outreach for new policy changes
 - 5-month campaign May 1 through September 30
 - Radio, TV, Outdoor, Print, Web, E-mail
 - Alert public to new policies, penalties
 - Promote incentive programs and ways to cut water use



IN \$/GAL OF SAVINGS	Peak Day Savings (MGD)	FTEs	Average Year City Cost	Total Cost per Galon
Enhanced Water Use Management	0.18	3	\$187,000	\$0.38
Reduced Water Use	0.95	12	\$1,250,000	\$0.18
Utility Water Rates	0.08	1	\$0	\$0
Reducing Water Loss	4.00	1	\$100,000	\$0.21
Mandatory Toilet Retrofits	2.18	2	\$342,530	\$2.77
Annual Irrigation System Analysis	1.47	2	\$138,000	\$0.90
Residential Irrigation Standards	1.30	4	\$645,000	\$1.00
Coating Towers	0.95	0.25	\$15,000	\$0.16
Plumbing Code Changes	0.94	0.50	\$30,000	\$0.30
Commercial Irrigation Standards	0.74	2	\$120,000	\$1.60
Enhanced Irrigation Audit Program	0.63	1	\$137,000	\$2.18
Submetering	0.58	0.50	\$30,000	\$0.49
Residential Landscape Ordinance	0.44	2	\$125,000	\$2.81
Commercial Clothes Washers	0.43	0.25	\$15,000	\$0.35
City Facility Conservation	0.37	1	\$0	\$0
Winter Leak Detection Program	0.31	1	\$0	\$0
Pressure Reduction Program	0.29	1	\$30,000	\$1.07
WaterWise Landscaping Option	0.21	0.25	\$15,000	\$0.71
Car Washes	0.15	0.25	\$15,000	\$1.00
Comprehensive Public Education	n/a	n/a	\$725,000	-
TOTALS	32.74	17.00	\$6,714,000	

* Austin Water estimate